

19 / 08 / 21

(D1) Jarefa Básica - Kaira Malta - C711317

$$P_8 = 8! = 40320$$

$$P_2 \begin{array}{|c|c|} \hline 2 & 1 \\ \hline \end{array} P_7 = 7 \cdot 6 \cdot 5 \cdot 4 \cdot 3 \cdot 2 \cdot 1 = 7!$$

$\downarrow 50!$

A P } 2 casos possíveis  
P A

$$P_2 \times P_7 = \text{juntos}$$

$$2 \times 5040 = 10080$$

$P_8$  - juntos = separados

$$40320 - 10080 = 30240$$

$$(2) \quad \underline{1 \cdot 5} \mid \underline{5 \cdot 4 \cdot 3 \cdot 2 \cdot 1} = 5, 5!$$

$$5 \cdot 120 = 600$$

7 escolhas

> restaurante não entra fixa 5  
> com o restaurante menos 1 vez = 5

(D)

$$(3) \quad \text{MORAL} \quad (A)$$

$$\underline{5 \cdot 4 \cdot 3 \cdot 2 \cdot 1} = 5!$$

~~(4)~~

$$\underline{1} \quad \underline{7} \quad \underline{6} \quad \underline{5} \quad \underline{4} \quad \underline{3} \quad \underline{2} \quad \underline{1} \quad \underline{1} = 7!$$

(C)

$$\textcircled{5} \quad \underbrace{2 \cdot 5 \cdot 4 \cdot 3 \cdot 2 \cdot 1}_D \cdot \underbrace{1}_E = 5! \cdot 2 = 240$$

$$\textcircled{6} \quad \boxed{\underbrace{2}_2 \underbrace{1}_1} \cdot \underbrace{4}_4 \cdot \underbrace{3}_3 \cdot \underbrace{2}_2 \cdot \underbrace{1}_1 = 4! \cdot 2 = 48$$

(B)

$$\textcircled{7} \quad \underbrace{4}_4 \cdot \underbrace{5}_5 \cdot \underbrace{4}_4 \cdot \underbrace{3}_3 \cdot \underbrace{2}_2 \cdot \underbrace{1}_1 \cdot \underbrace{3}_3 = P_5 \cdot 6 = 720$$

$$4 \times 3 = 12 = 6 \Rightarrow 6 \cdot 5! = 720 \quad (B)$$

... 2  $\rightarrow$  número de repetições

$$\textcircled{8} \quad \boxed{\underbrace{2}_2 \underbrace{1}_1} \cdot \underbrace{4}_4 \cdot \underbrace{3}_3 \cdot \underbrace{2}_2 \cdot \underbrace{1}_1 = 4! \cdot 2$$

$$= 24 \cdot 2 = 48$$

$$= 5! - 48 = 72$$

(B)

$$\textcircled{9} \quad \underbrace{6}_6 \cdot \underbrace{5}_5 \cdot \underbrace{4}_4 \cdot \underbrace{3}_3 \cdot \underbrace{2}_2 \cdot \underbrace{1}_1 = 3 \cdot P_6^{3,3} = \frac{3 \cdot 6!}{3! \cdot 3!} = 60$$

6	5	4
3	1	1
3	2	1

(E)

definir o resto não pode 1 (3 cores para mulheres)